

WHAT IS CLAIMED IS:

1. Seed of a soybean variety designated SG5010NRR, representative seed having been deposited under ATCC Accession No. _____.
2. A soybean plant, or parts thereof, produced by growing the seed of claim 1.
3. Pollen of the plant of claim 2.
4. An ovule of the plant of claim 2.
5. A soybean plant, or parts thereof, having all of the physiological and morphological characteristics of the soybean plant of claim 2.
6. A tissue culture of regenerable cells from the plant of claim 2.
7. A tissue culture according to claim 6, the cells or protoplasts of the tissue culture being from a tissue selected from the group consisting of: leaves, pollen, embryos, cotyledon, hypocotyl, meristematic cells, roots, root tips, anthers, flowers, seeds, stems and pods.
8. A soybean plant regenerated from the tissue culture of claim 6, wherein the regenerated plant is capable of expressing all of the morphological and physiological characteristics of soybean cultivar SG5010NRR.
9. A soybean plant with all of the physiological and morphological characteristics of soybean variety SG5010NRR, wherein said soybean plant is produced by a tissue culture process using the soybean plant of claim 5 as the starting material for such a process.
10. A method for producing a hybrid soybean seed comprising crossing a first parent soybean plant with a second parent soybean plant and harvesting the resultant hybrid soybean seed, wherein said first parent soybean plant or said second parent soybean plant is the soybean plant of claim 2.
11. A hybrid soybean seed produced by the method of claim 10.
12. A hybrid soybean plant, or parts thereof, produced by growing said hybrid soybean seed of claim 11.
13. A soybean seed produced by growing said hybrid soybean plant of claim 12 and harvesting the resultant seed.

14. A method for producing a soybean variety SG5010NRR-derived soybean plant, comprising:
 - a) crossing soybean variety SG5010NRR, representative samples of said variety having been deposited under ATCC accession number _____, with a second soybean plant to yield progeny soybean seed; and
 - b) growing said progeny soybean seed, under plant growth conditions, to yield said soybean variety SG5010NRR-derived soybean plant.
15. A soybean variety SG5010NRR-derived soybean plant, or parts thereof, produced by the method of claim 14, said SG5010NRR-derived soybean plant expressing a combination of at least two SG5010NRR traits selected from the group consisting of: a relative maturity of approximately 4.6 to 5.6, excellent yield, above average general appearance and adapted to Central, Northeast, Northcentral, Southeast, Southcentral, Southwest or Western regions of the United States.
16. The method of claim 14, further comprising:
 - a) crossing said soybean variety SG5010NRR-derived soybean plant with itself or another soybean plant to yield additional soybean variety SG5010NRR-derived progeny soybean seed;
 - b) growing said progeny soybean seed of step (a) under plant growth conditions, to yield additional soybean variety SG5010NRR-derived soybean plants; and
 - c) repeating the crossing and growing steps of (a) and (b) from 0 to 7 times to generate further soybean variety SG5010NRR-derived soybean plants.
17. A soybean variety SG5010NRR-derived soybean plant, or parts thereof, produced by the method of claim 16, said SG5010NRR-derived soybean plant expressing a combination of at least two SG5010NRR traits selected from the group consisting of: a relative maturity of approximately 4.6 to 5.6, excellent yield, above average general appearance and adapted to Central,

Northeast, Northcentral, Southeast, Southcentral, Southwest or Western regions of the United States.

18. The method of claim 14, further comprising utilizing plant tissue culture methods to derive progeny of said SG5010NRR-derived soybean plant.
19. The soybean plant, or parts thereof, of claim 5, wherein the plant or parts thereof have been transformed so that its genetic material contains one or more transgenes operably linked to one or more regulatory elements.
20. A method for producing a soybean plant that contains in its genetic material one or more transgenes, comprising crossing the soybean plant of claim 19 with either a second plant of another soybean variety, or a non-transformed soybean plant of the soybean variety SG5010NRR, so that the genetic material of the progeny that result from the cross contains the transgene(s) operably linked to a regulatory element.
21. Soybean plants, or parts thereof, produced by the method of claim 20.
22. A soybean plant, or parts thereof, wherein at least one ancestor of said soybean plant is the soybean plant of claim 2, said soybean plant expressing a combination of at least two SG5010NRR traits selected from the group consisting of: 4.6 to 5.6, excellent yield, above average general appearance and adapted to Central, Northeast, Northcentral, Southeast, Southcentral, Southwest or Western regions of the United States.
23. A method for developing a soybean plant in a plant breeding program using plant breeding techniques which include employing a soybean plant as a source of plant breeding material comprising: using the soybean plant, or its parts, of claim 2 as a source of said breeding material and using one or more plant breeding techniques selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.
24. A soybean plant, or parts thereof, produced by the method of claim 23.